

**2011 CaRES Evaluations Completed by Interns
N=36 (84% of 43 Interns) Responded**

How many CaRES internships have you done with us at UAB prior to this summer?

Responses	Frequency	N=35
0	26	
1	9	

Please rate how well your preceptor...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Gave you the orientation and assistance you needed.	4.47	36
Showed interest in your progress or learning.	4.67	36
Was available to supervise, assist, or advise you.	4.42	36
Demonstrated an understanding of the goals and objectives of the CaRES program.	4.47	36
Made clear his/her expectations of you as an intern.	4.47	36

Please rate how well the CaRES administrators and staff...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Explained to you how the program was to work.	4.86	36
Responded to your questions or concerns.	4.78	36
Clearly outlined expectations for you as an intern.	4.92	36

Please tell us how much the CaRES program helped you to...

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
Build your overall knowledge of the particular research area you worked in.	4.81	36
Build your overall knowledge of scientific methods and the research process.	4.75	36

Please give us your overall assessment of our program.

5=Excellent 4=Good 3=Neutral 2=Fair 1=Poor

	Mean	N
How would you rate the quality of your overall educational, research, and training experience provided by the CaRES program?	4.81	36

Please tell us whether you agree or disagree with the following statements...

5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree

	Mean	N
Based on your prior education, experience, and skills, you were well matched with your research project.	4.63	35
You had a positive research relationship with your preceptor.	4.81	36
Your preceptor should be approved again to oversee a CaRES intern.	4.69	36
Your stipend was adequate.	4.75	36

Your hours were flexible.	4.89	36
Your internship was an effective way to obtain a short training experience in cancer research.	4.83	36
The CaRES seminar was an effective way for you to communicate your research activities.	4.39	33
The CaRES seminar guest speakers were a valuable component of the seminar.	4.18	33
The CaRES seminar guest speakers were effective in providing useful information.	4.33	33
You interacted with people with whom you could collaborate on future research.	4.36	36
You are likely to pursue a career in cancer research once you leave school.	3.78	36

The CaRES program helped me to _____ my career plans or path when it comes to cancer research. (choose all that apply)

	Frequency (%)	N
“identify”	8 (23.5)	34
“solidify”	8 (23.5)	34
“refine”	19 (55.9)	34
“narrow”	7 (20.6)	34
“eliminate options from”	2 (5.9)	34
“decide to change”	1 (2.9)	34

How much has the CaRES internship taught you?

3=Greatly enhanced 2=Moderately enhanced 1=Somewhat enhanced 0=Did not enhance

	Mean	N
Your general writing skills	1.33	36
Your scientific writing skills	1.78	36
Your ability to perform laboratory procedures	1.97	36
Your knowledge of research design	2.31	36
Your data analysis skills	2.29	36
Your knowledge about doing research in an academic setting	2.58	36
Your knowledge about acquiring grants and funding	1.64	36

What are you planning to do with your research?

3=Already Submitted 2=In Progress 1=Being Planned 0=Not Applicable

	0	1	2	3
Use your summer project as the basis for a thesis or dissertation proposal	27	6	2	1
Speak at an academic conference	24	9	2	1
Present a poster at an academic conference	16	8	7	5
Draft and submit a manuscript for publication	10	18	6	2

End of Statistical Summary

See related comments on the following pages.

2011 CaRES Intern Commentary for Selected Questions

29) “The CaRES program helped me to _____ my career plans or path when it comes to cancer research”: Fill in the blank and explain your answer.

[Fill in the blank with one or more of these words: identify, solidify, refine, narrow, eliminate options from, decide to change]

Summary: The overwhelming response was that the CaRES internship helped refine the interns’ career paths with many stating that cancer research is in their future. Almost all of the interns will likely include some type of research in their future. By participating in the CaRES program, several interns realized that clinical research was a good fit which helped them to identify or refine their career plans. For others, the program helped them to identify or solidify their future career plans such as disparities and prevention research or going into surgical oncology. Individual comments are presented below.

- Identify: My CaRES internship helped me identify a potential career option in cancer research/prevention that I might not have considered before. My internship was primarily clinical in nature and offered me a unique experience that many other CaRES participants were unable to have. During my summer, I felt I had a direct impact on decreasing the risk of cancer in the patients I counseled in their attempt to quit smoking or using other tobacco products.
- Refine, Narrow: I was interested in skin cancer research before, but this experience enhanced that interest further.
- Identify, Refine: The CaRES internship has provided me alternative avenues in incorporating my cancer background with my future a career in Public Health. I know now that I am not limited in making a difference clinically or doing lab research, I can conduct behavioral programs or qualitative studies as well. Furthermore, I have begun looking at behavioral research positions at the American Cancer Society as a potential job after graduation.
- Solidify, Refine: I have always had an interest in oncology. Working through this program and interacting with physicians who take care of the cancer patients was gratifying.
- Identify: Through CaRES I found that clinical research is much more fitting for my personality and strengths.
- Refine: I have a greater interest in clinical research now. I think that clinical research is more efficient and applicable than laboratory research.
- Refine: My experience with the CaRES program this summer enlightened me to the fact that a wide range of skills are needed in cancer research. Before this internship, I felt that anyone performing cancer research needed to spend significant time in a traditional wet laboratory. However, I now see the necessity of all different skill types on the research team. Skills and interests I possess, such as data analysis and management, are necessary parts of any research process.
- Refine: CaRES gave me a chance to perform a literature review and write a paper, which I thoroughly enjoyed and would like to do again in my career.
- Narrow: My CaRES experience gave me good exposure to data management and research methods that will help me in future endeavors and allow me to further narrow my career choices.

- Solidify: I've known that I want to go into surgical oncology. My experiences confirmed these beliefs.
- Refine, Narrow, Decide to change: I am interested in social determinants of health and social epidemiology. The CaRES program helped me realize that cancer and social determinants are not mutually exclusive.
- Solidify: My CaRES program solidified my interest in disparities and prevention research.
- Identify, Refine: The internship that I worked with adequately allowed me to participate in research in the area in which I'm interested. Furthermore, the CaRES program helped me address other areas of my interest that I could possibly pursue which is that of cancer.
- Refine: I do not intend to pursue research full-time and will likely only do clinical trial or surgical outcome research. I am interested in cancer, and in any specialty I go into, I will deal with cancer. I feel that CaRES gave me a good background to draw upon for later research planning.

41) Please provide details about any of the boxes you have checked above. Give titles and authors, in order, if available.

Summary of comments: Many CaRES interns were involved in different stages of research projects. Some were in the process of submitting papers while others were still working on their projects. There were several interns who completed projects that they will be presenting posters at UAB Medical Student Research Day, the UAB Comprehensive Cancer Center Research Retreat, and the annual APHA meeting. Many manuscripts are in the works or are being discussed with preceptors. A lot of work was accomplished and there will be many publications in the future co-authored by these interns.

42) What do you consider to be the STRENGTHS of your internship?

Summary of comments: The interns listed many strengths of the program including the excellent mentoring of the preceptors, learning new lab techniques, the program's flexibility, and having the opportunity to practice research in a real world setting. Many interns enjoyed getting the opportunity to apply what they learned in class as well as gaining a better understanding of how research works outside of a classroom. Other strengths mentioned were the opportunities to interact with physicians and research participants and the independence and encouragement given by the preceptors. Overall, they thought the CaRES internship was a valuable experience and they enjoyed this research opportunity. Individual comments are presented below.

- The people I worked with were stellar. I feel lucky to have had the opportunity to work with them.
- Working with individuals at great risk for cancer and helping them decrease their risk was empowering.
- My supervisor provided me with all the knowledge and resources I needed to be a competent intern. I felt like a professional by the time I left because of her willingness to help me adapt and learn.
- Learning specific lab techniques (e.g. Western blots)
- The strengths were the independent work and flexible schedule, the overall theme and goals of the study were relevant to my research interests, the ability to be in control in developing the necessary tools for carrying out the study, and the interaction with the participants.

- The opportunity of working in preceptor's lab was great. Preceptor is an excellent mentor.
- Gaining a better understanding of how community-based interventions work outside of the classroom.
- Main strength was its cultural immersion aspect. The ability to conduct research on another continent is a learning experience in so many ways.
- I learned a lot about surgical pathology and radiology. Also, histology and immunohistochemical markers and their significance.
- I was given full ownership of the database project. This responsibility pushed me to be proactive in both requesting feedback from my preceptor and addressing pertinent problems. The work provided the right the level of intellectual rigor and creativity to make it enjoyable.
- While researching and reviewing the literature concerning tobacco policies in schools, I came across an article about a study that showed a 90% decrease in smoking and tobacco use among students, faculty and staff when comprehensive tobacco policies were developed and enforced. This article showed me that we can make a difference in tobacco use in schools if they will develop and enforce comprehensive tobacco policies!
- CaRES provided me an opportunity to perform research and learn skills in relation to not only cancer, but also public health in general. This is an opportunity that I would not have received solely in the classroom. My preceptor was also incredibly flexible and understanding in relation to my schedule. This flexibility was paramount to making the experience not only wonderful but also possible.
- The flexibility of my CaRES experience was essential. It allowed me to have a rigorous, but enjoyable research experience.
- Not only was I able to interact with the attending physicians, residents, and fellows on a daily basis, but I was also able to work in a lot of valuable operating room experience during the course of my internship.
- One of the biggest strengths of this internship was that I was afforded the opportunity to interact directly with study participants, from initial contact/recruitment, to meeting them in person and administering the questionnaire and receive their blood sample.
- Community-based research
- My particular internship was great because I had lots of responsibilities and freedoms that I would otherwise have not been qualified for. My knowledge of lab techniques and procedures grew immensely, and I am very appreciative of that. CaRES is a great program, and one I hope to participate in next year.
- I really enjoyed the project and the ability to conduct research while still being able to interact with patients. Also, preceptor was an amazing mentor.
- I was given the opportunity to participate in all aspects of the research project. I was challenged with performing work that I have never done before which was a great learning experience.
- Preceptor gave me a lot of independence and encouragement.

43) What do you consider the WEAKNESSES of your internship?

Summary of comments: Many interns did not find any weaknesses in the program, but a few stated concerns. The most common concern was the limited duration of the internship which is an aspect of summer programs. Some interns felt that there needed to be better communication and more guidance from the preceptors about projects while other felt like they had too much guidance and wished for more responsibility with tasks. Other concerns interns had were that they did not get to learn as much as they would have liked about certain subject matter. Individual comments are presented below.

- I think one of the larger weaknesses were the hourly timesheets. Requiring a signature every two weeks is a signal of a lack of trust. I do not know why we can't sign a form with our mentor indicating how many hours we will work at the beginning of the summer. I think how you frame the program gives students different impressions of your expectations and will influence how they approach their work.
- I really did not find any weakness. However, the duration for the internship was really brief, especially when my objective as intern was carrying out this pilot study. It was not enough time to account for any challenges that could delay the research process.
- My experience was extremely positive.
- The task at hand was very monotonous at times. It would have been nice to have greater responsibility.
- The strength of being abroad also served as a weakness. We had to learn patience when dealing with the more relaxed, indifferent attitudes of the Ghanaian ethics board.
- I do not have any complaints about my internship.
- Because my project was based in preparing for the acquisition of data, I did not gain a significant amount of knowledge on the intricacies of HPV in HIV infected women. I was able to understand the trial design and the purposes behind the tests, but I felt like much of the disease knowledge, because it was not directly applicable to the database design phase, was not well conveyed.
- My hours were limited. Because of these limits, I was not able to research as much as I would have liked.
- I had to pave my own way more than most, but that provided a learning experience. I'm much more confident in my ability to work independently of my mentor as a result.
- The PI's (preceptor) expectations for my internship needed to be better communicated to the program coordinator.
- The only real weakness with CaRES is that our stipends aren't endless. I personally worked almost 50 hours every week, and would continue working there if the program had not ended. This is not a weakness of CaRES as much as it is a tough economy. I believe Dr. Waterbor does a good job in giving as many people as possible the opportunity to participate, and unless further grant money could magically appear, I think he could not do any better.
- I did not think there were any weaknesses.

44) What SPECIFIC RECOMMENDATIONS do you have to improve the CaRES internship program (e.g., recruitment, application, or interview process; ways the program could better match interns to projects, etc.)?

Summary of comments: Many interns thought that the CaRES program was well organized and did not have any recommendations. However, there were a few suggestions. Some suggestions were that the time sheets be electronic, that there is an online application process, to notify students more promptly of their acceptance/rejection after the interview, allowing an extension if the research project is delayed, increasing the number of international internships available or funds for the international internships. Individual comments are presented below.

- Please advise preceptors to notify students promptly of their acceptance/rejection following interview.
- I think you can either structure this like a research grant—both professional grants or any a student grant like the T35 or any other I have heard of at other institutions--or something more along the lines of a temporary helper position and do away with the timesheets.
- My only recommendation is to allow an extension or that CaRES should work with the preceptor in case the research project is delayed. The delay can limit the intern in completing their tasks or give them many unproductive days, and by allowing this extension the student can have a more finite end and end results.
- I think it is extremely well organized.
- Thought the CaRES program was great!
- Think the program is generally great. However, it lacks special accommodations for international projects such as financial consideration for travel since interns have to travel abroad before they can begin working.
- If possible, more projects involving data management and analysis should be offered. Also, if funding is available, it would be nice to see the sponsorship of more projects abroad.
- I would like to be able to turn my timesheets in electronically.
- I think a certain degree of screening the merit of projects should be used to better allocate resources. It was obvious that some of the other projects were not going to produce significant results, as they were measuring contrived, objective end-points. One or two of the projects weren't even research; they were centered around public awareness of cancer risk factors.
- The only note I would like to add here is regarding my lab dissipating. Dr. Piazza has moved to South Alabama to head up their new comprehensive cancer center. I feel that he was a great preceptor and hope that an exception could be made to allow a student to work under him again in his new lab at South Alabama.
- I wouldn't change anything about the process. I enjoyed the competitive process and thought it was a very real world experience.

45) What are your career plans?

Summary of comments: Many of the interns' plans include either going to or finishing medical school. Most plan to continue pursuing research as part of their career. Some of the medical students planned to

pursue careers in surgery, oncology, internal medicine, primary care, or pediatrics. There is a lot of interest in cancer research. Some of the interns want to have careers in epidemiology while others still remain uncertain but want a career that includes research. Individual comments are presented below.

- I am still unsure but I know that I would enjoy working in cancer research.
- I am applying to doctoral programs in developmental psychology. If not admitted I would like to pursue a career in counseling in the healthcare setting.
- Physician – surgical specialty
- After receiving either a PhD or MD, I want to be able to design programs to promote and engage people in being more proactive about their health, rather than reactive, especially in rural areas and underserved populations.
- I am not sure yet but I would like to go into oncology.
- Pursue either PhD or MD
- Plan to become a physician and also plan to conduct clinical research with my patients
- Considering oncology and hope to do research
- After my MPH I hope to perform some kind of analytic work for an NGO focused on global health program implementation, such as the Clinton Health Access Initiative.
- I would like to work in the field of health education at a university.
- I am not sure of my career plans at this time.
- Undecided. Hopefully, a blend of clinical medicine and public health research
- I plan to go into match into a surgical program with intentions of becoming a surgical oncologist. Whether or not I do this through Otolaryngology remains to be seen.
- Uncertain! I am interested in research and I am currently applying to PhD programs in Epidemiology.
- Currently working towards M.D. and want to be a public health-focused primary care physician involved in academic medicine.
- Hopefully medical school
- To complete medical school, and to hopefully become a pediatrician
- I plan to complete my residency in Internal Medicine and possibly specialize in Geriatric Medicine.
- I plan to attend medical school and specialize in pediatrics so I would like to continue to incorporate some type of pediatric research.
- I am looking to go into surgery.

End of Intern Commentary

**2011 CaRES Evaluations Completed by Preceptors
N=22 Preceptors (85% of 26 Preceptors) Responded**

Administration of the CaRES program				
<i>5=Strongly Agree 4=Agree 3=Neutral 2=Disagree 1=Strongly Disagree 0=N/A</i>				
	N	Mean		
You had strong applicants to interview	20	4.70		
Interviews were effective	20	4.70		
CaRES program allowed you to accelerate your research program	21	4.64		
	N	Mean	Min	Max
How many Interns did you interview	21	3.67	1	10
How many interns did you offer a position and mentor	21	1.81	1	4
<i>3=Not a Problem 2=Acceptable 1=Serious/Frequent Problem 0=N/A</i>				
	N	Mean		
Communications with CaRES program faculty about how the program worked	22	2.91		
CaRES program faculty allowing flexibility in intern's work schedule	22	2.95		
CaRES program faculty responding to your questions	21	2.95		
Adequacy of stipend support	21	2.90		
Expectations for CaRES preceptors and interns	22	2.91		
Administration of the CaRES program	21	2.81		

Benefits to You		
<i>4=Invaluable 3=Very Helpful 2=Somewhat Helpful 1=Not Helpful 0=N/A</i>		
	N	Mean
Conceptualizing research methods/procedures	17	2.71
Designing the research plan	15	2.53
Analyzing data	20	2.88
Interpreting results	21	2.64
Writing final paper/report	17	2.53

Your Future Involvement in CaRES	N	#Yes	%Yes
Are you willing to consider being a preceptor in CaRES next summer	22	21	95

CaRES Intern Evaluation			
<i>4=Excellent 3=Good 2=Adequate 1=Poor 0=N/A</i>			
Intern Work Ethic	[here N* is the number of interns]	N *	Mean
Work Hours		36	3.56
Research Tasks		36	3.53
Meeting Deadlines		36	3.44
Intern Research Ability	[here N* is the number of interns]	N*	Mean
Conceptualization & designing research		30	3.33
Understanding methodology		36	3.56
Analysis/interpretation of data		35	3.23
Writing Quality		25	3.28

* Larger N in this section due to preceptors evaluating multiple interns

End of Statistical Summary; see related comments on the following pages.

2011 CaRES Preceptor Commentary for Selected Questions

Administration of the CaRES Program

Summary: The overall theme of preceptor comments regarding problems that need to be addressed are that there are none. Most left this section blank. There was only one comment suggesting that the series of interviews with applicants could be more efficient to avoid wasting time. However, that was countered by another comment saying the program was efficient. Individual comments are presented below.

- It is a useful and user-friendly program.
- I felt the administration of this program was excellent and very efficient, allowing for time to be spent doing research.
- It was challenging to schedule a series of interviews with applicants who were simultaneously applying for multiple CaRES opportunities. Some would cancel at a late hour or not report for an interview, hoping for a different position for which they did not have an interview scheduled. Perhaps there is an alternative to avoid wasting time of faculty members and research staff.

Benefits to you as a CaRES Preceptor

Summary: Preceptors found many tasks for the interns to do over the summer including research planning, data collection and entry, performing experiments, writing protocols, recruiting patients, and data analysis. Specific intern activities and the benefits that they provided as mentioned by the preceptors are as follows:

- Intern provided invaluable assistance by performing experiments with care and diligently documenting procedures and results.
- Fresh perspectives and careful way of thinking through problems, applying what they have learned. Sometimes faculty take things for granted or skip steps after doing research for a long time. Interns keep you honest.
- They assisted with writing protocols and with literature searches.
- They have been exceptionally helpful in contributing to study logistics, educational materials, and interacting with study participants.
- Intern was invaluable at co-leading the pilot intervention.
- Patient recruitments, data entry, data management, data analysis, presentation of findings
- Assisting with implementation of behavioral intervention, data collection, and participant retention.
- Coordinating implementation of research activity and successfully conducting interviews and building rapport with participants.

Your Future Involvement in CaRES

Summary: Preceptors were overwhelmingly in favor of continuing their participation in the CaRES program. They cited reasons such as mutually beneficial to preceptor and intern, outstanding source for high quality interns, invaluable assistance, and an excellent, well-run program. Specific comments (compelling comments indicated in *bold italics*) are as follows:

- *The CaRES program is an outstanding source for high quality, motivated students that can provide much needed assistance at no cost to investigators. This is particularly valuable with our shrinking research budgets in the current challenging funding environment.*
- Over the years, we have had very good interns who seemed to benefit from their exposure to our research, particular the community-based research projects.
- Quality interns and very interesting people to work with
- The students were enthusiastic, appreciative, and most importantly, productive!
- It's a great way to interact with students one on one, which is more rewarding to me than the classroom. Also having the occasional student from medicine or dentistry is always a treat because they relate well to health promotion and disease prevention.
- Great program and easy to work with
- I have enjoyed mentoring two CaRES interns during past years; one elected to continue his research related to cancer prevention, earning a doctorate in Health Education/Health Promotion from UAB. During the summer of 2011, CaRES provided an opportunity for a graduate student with less research experience to become engaged in scholarship. She credits this with augmenting knowledge gained through required course work, suggesting new employment opportunities. *In both cases, my goal was achieved, i.e. to enhance students' knowledge and skills as young researchers.*
- This was a mutually beneficial experience in which a graduate student was able to gain valuable experience in cancer-related behavioral science research, while the study was able to utilize the intern in providing key skills to our data collection and intervention development.
- Program is extremely valuable and outstanding.
- Program is well run and provides invaluable assistance.

End of Preceptor Commentary